Determination of Potential Agricultural Conservation Savings (Low End of Range)
South Coast

Input Data from DWR

Applied Water	755	(1,000 af)
Depletion	665	(1,000 af)
ET of Applied Water	542	(1,000 af)

Assumptions for Calculations

1. Ave. Leaching Fraction = 14%

2. % lost to Channel Evap/ET [3] = 4%

3. Assumed allocation of conservation betw District and On-farm
district portion = 1/3 of savings * "adjustment factor"

canal lining:	0.5	
tailwater:	0.5	(adjustment factor
flexibility:	0.5	based on region variation
meas/price:	2	in water districts)
	3.5	(points for this region's districts
		of 4 points for average)

0.875 = adjustment factor

29% = district portion
71% = on-farm portion

Calculations from Input Data

	(1,000 af)	
Total Existing Losses	213	(Diff betw. Applied Water and ETAW)
Total Irrecoverable losses	123	(Diff betw. Depletion and ETAW)
Total Recoverable losses	90	(Diff betw. Applied Water and Depletion)
Ratio of Irrecoverable Loss	58%	(Irrecov divided by total existing losses)
Portion lost to leaching	44	(Leach Fraction * ETAW * Irrec. Loss Ratio * Adj. Factor)
Portion lost to Channel Evap/ET	30	(Applied Water * % lost to Channel Evap/ET)
Total Loss Conservation Potential	139	(Total Existing loss - portion to leaching - portion to channel evap/ET)
Irrecoverable Portion	49	(Irrec loss - portion to leaching - portion lost to channel evap/ET)
Recoverable Portion	90	(Total Existing loss - Irrecoverable Loss Portion)

Incremental Distribution of Conservable Portion of Losses

		Distrib. Factor	Applied Water Reduction [1] (1,000 ac-ft)	Irrec. Loss Reduction [2] (1,000 ac-ft)	Rec. Loss Reduction (1,000 ac-ft)
No Action Increment =	1st 40%	0.40	56	20	36
CALFED Increment =	next 30%	0.30	42	15	27
Remaining =	final 30%	0.30	42	15	27
			139	49	90

Summary of Savings:

Existing Applied Water Use = 755

Total Potential Reduction of Application

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	39	30	69
District	--	16	12	28
Total	213	56	42	97

Recovered Losses with Potential for Rerouting Flows

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	26	19	45
District	--	10	8	18
Total	90	36	27	63

Potential for Recovering Currently Irrecoverable Losses

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	14	10	24
District	--	6	4	10
Total	123	20	15	34

Notes:
1. Calculated as the distribution factor times the "conservable portion" of the total existing loss. The first 40% of savings potential occurs under *No Action*. The next 30% of saving potential is the CALFED increment. The final 30% is considered "non-conservable".
2. Calculated as the distribution factor times the "conservable portion" of irrecoverable loss. The first 40% of savings potential occurs under No Action. The next 30% of saving potential is the CALFED increment. The final 30% is considered "non-conservable".
3. Derived from comparing consumptive conveyance loss values from USBR *Least-Cost CVP Yield Increase Plan*, T.A #3 (Sept. 1995) to applied water values for the region. A range of 2 to 4% was used to account for uncertainty. This value accounts for consumption by bank and riparian vegetation and channel evaporation.

Determination of Potential Agricultural Conservation Savings (High End of Range)
South Coast

Input Data from DWR

Applied Water	755	(1,000 af)
Depletion	665	(1,000 af)
ET of Applied Water	542	(1,000 af)

Assumptions for Calculations

1. Ave. Leaching Fraction = 10%

2. % lost to Channel Evap/ET [3] = 2%

3. Assumed allocation of conservation betw District and On-farm
district portion = 1/3 of savings * "**adjustment factor**"

canal lining:	0.5	
tailwater:	0.5	(adjustment factor
flexibility:	0.5	based on region variation
meas/price:	2	in water districts)

3.5 (points for this region's districts
of 4 points for average)

0.875 = adjustment factor

29% = district portion

71% = on-farm portion

Calculations from Input Data

	(1,000 af)	
Total Existing Losses	213	(Diff betw. Applied Water and ETAW)
Total Irrecoverable losses	123	(Diff betw. Depletion and ETAW)
Total Recoverable losses	90	(Diff betw. Applied Water and Depletion)
Ratio of Irrecoverable Loss	58%	(Irrecov divided by total existing losses)
Portion lost to leaching	31	(Leach Fraction * ETAW * Irrec. Loss Ratio * Adj. Factor)
Portion lost to Channel Evap/ET	15	(Applied Water * % lost to Channel Evap/ET)
Total Loss Conservation Potential	167	(Total Existing loss - portion to leaching - portion to channel evap/ET)
Irrecoverable Portion	77	(Irrec loss - portion to leaching - portion lost to channel evap/ET)
Recoverable Portion	90	(Total Existing loss - Irrecoverable Loss Portion)

Incremental Distribution of Conservable Portion of Losses

		Distrib. Factor	Applied Water Reduction [1] (1,000 ac-ft)	Irrec. Loss Reduction [2] (1,000 ac-ft)	Rec. Loss Reduction (1,000 ac-ft)
No Action Increment =	1st 40%	0.40	67	31	36
CALFED Increment =	next 30%	0.30	50	23	27
Remaining =	final 30%	0.30	50	23	27
			167	77	90

Summary of Savings:

Existing Applied Water Use = 755

Total Potential Reduction of Application

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	47	35	82
District	--	19	15	34
Total	213	67	50	117

Recovered Losses with Potential for Rerouting Flows

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	26	19	45
District	--	10	8	18
Total	90	36	27	63

Potential for Recovering Currently Irrecoverable Losses

(1,000af)	Existing	No Action	CALFED	Total
On-Farm	--	22	16	38
District	--	9	7	16
Total	123	31	23	54

Notes:
1. Calculated as the distribution factor times the "conservable portion" of the total existing loss. The first 40% of savings potential occurs under *No Action*. The next 30% of saving potential is the CALFED increment. The final 30% is considered "non-conservable".
2. Calculated as the distribution factor times the "conservable portion" of irrecoverable loss. The first 40% of savings potential occurs under No Action. The next 30% of saving potential is the CALFED increment. The final 30% is considered "non-conservable".
3. Derived from comparing consumptive conveyance loss values from USBR *Least-Cost CVP Yield Increase Plan*, T.A #3 (Sept. 1995) to applied water values for the region. A range of 2 to 4% was used to account for uncertainty. This value accounts for consumption by bank and riparian vegetation and channel evaporation.